No. 20,110. PATENTED APR. 27, 1858.

T. WARKER.

IMPLEMENT OR DEVICE FOR IMPREGNATING LIQUIDS WITH CARBONIC ACID GAS.

Fig: 2.

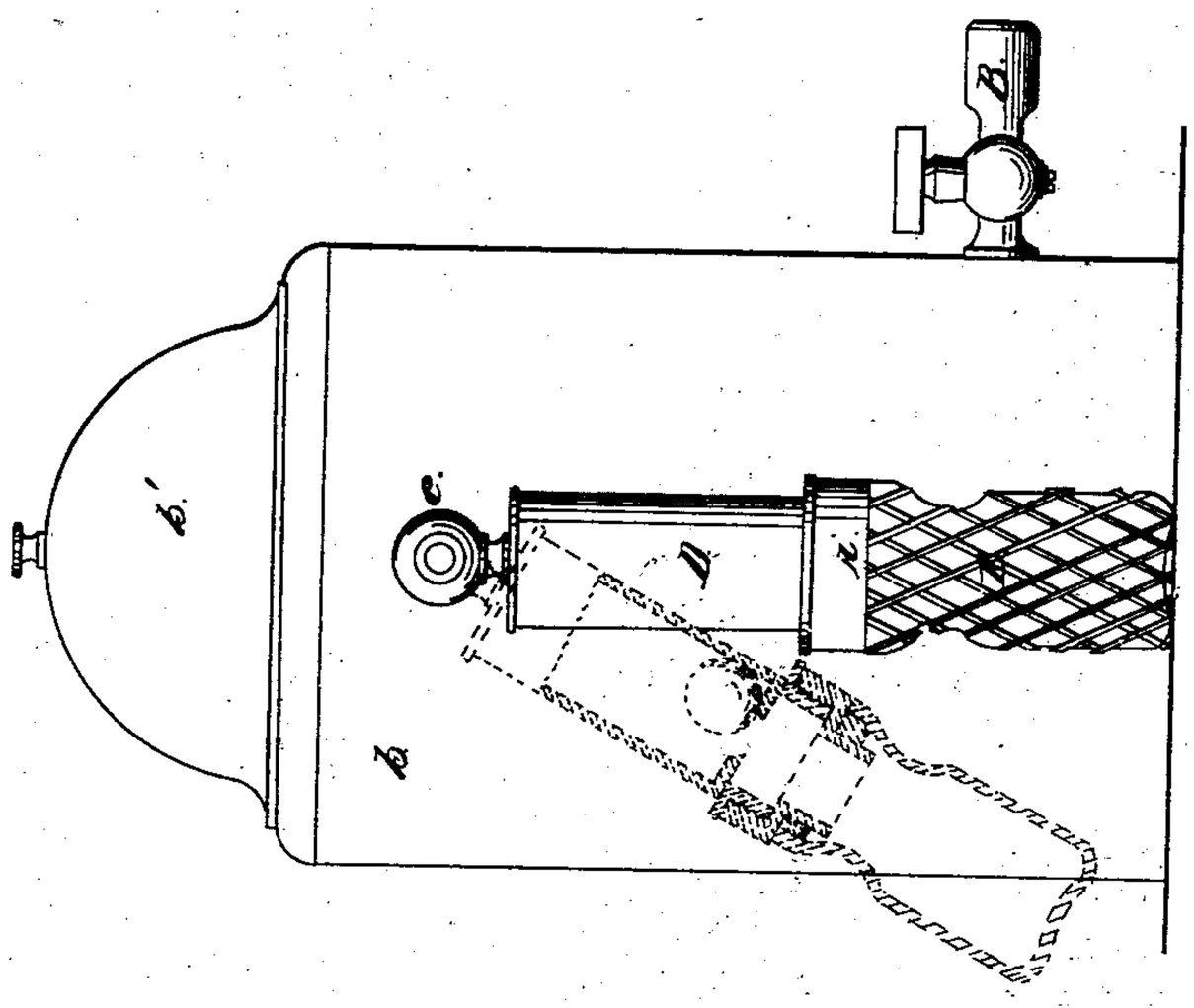
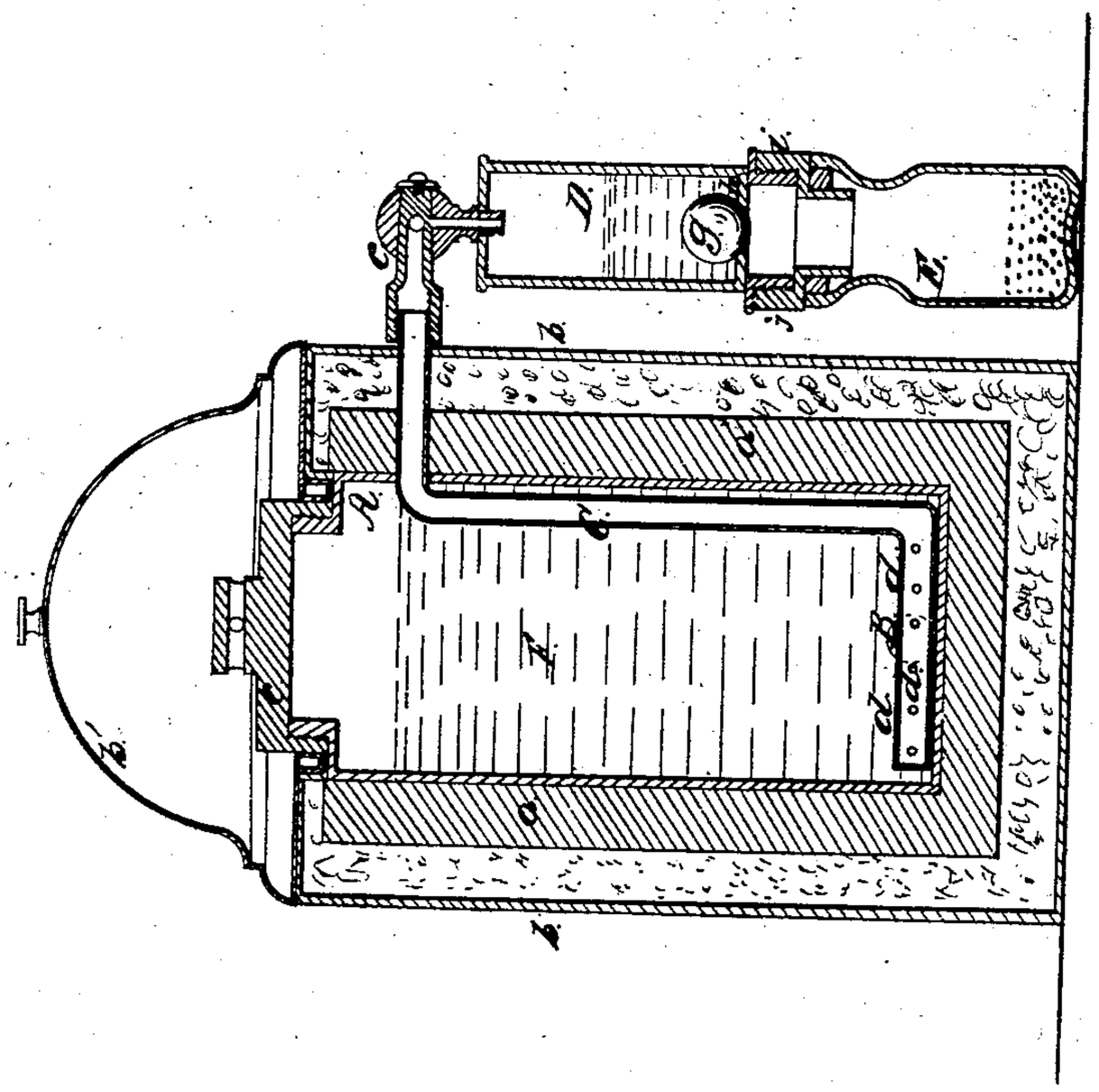


Fig: 1.



UNITED STATES PATENT OFFICE.

THOS. WARKER, OF NEW YORK, N. Y.

APPARATUS FOR GENERATING CARBONIC-ACID GAS.

Specification of Letters Patent No. 20,110, dated April 27, 1858.

To all whom it may concern:

Be it known that I, THOMAS WARKER, of the city, county, and State of New York, have invented a new and Improved Implement or Device for Impregnating Beverages with Carbonic-Acid Gas; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical central section of my improvement applied to a receiver which is also bisected in the same plane. Fig. 2, shows my improvement in two different positions one externally and in a vertical position shown in black, and the other inclined and bisected vertically and centrally shown in red.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to generate carbonic acid gas, and charge liquids with the same in such a way that no gas can escape during the process, a difficulty hitherto attending devices designed for this purpose.

The invention consists in attaching a bottle to a chamber in the lower part of which a ball valve is placed. The bottle containing the supercarbonate of soda, and tartaric acid, or other substances from which carbonic acid is generally evolved by the addition of water or an acid, the latter being placed in the chamber which contains the valve. The whole being so arranged that the valve may be opened by the tilting or inclining of the water or acid chamber and the gas generated and the liquid in the receiver charged without the least chance of the gas escaping.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a receiver in which the liquid to be charged is placed. This receiver may be formed of a wooden vessel *a*, encompassed by a sheet metal case *b*, a space being allowed between them at all sides to receive any non-conducting material such as charcoal, chaff, or the like. *c*, is the cover of the receiver which may be of metal and so arranged that it may be screwed upon a proper flange, attached to the top of the vessel *a*, the interior of which may be lined with sheet metal tinned or plated with a suitable substance, so as to resist the action of the carbonic acid gas. The lower part of the receiver is provided with a faucet B, and the case *b*, is provided with a cover *b'*.

C, is a tube which passes through the side of the receiver A, extends down to its bottom and is perforated with holes *d*. To the end of the tube C, a swivel tubular joint *e*, is attached and this swivel joint communicates with a chamber D, which may be of cylindrical form and constructed of tin or other substance capable of resisting the action of the gas. In the bottom of the chamber D, a ball valve *g*, is placed, said valve being fitted on a proper seat *h*.

E, is a glass bottle provided with a cap *i*, which has an internal screw thread *j*, so as to screw on the lower end of the chamber D.

The implement is used as follows:—The bottle E, is supplied with the substances usually employed for generating carbonic acid gas, as for instance, supercarbonate of soda, and tartaric acid. The chamber D, is supplied with water and the bottle E, is then screwed to the chamber. The valve *g*, retains the water in chamber D, when said chamber is in a vertical position. The liquid F, to be impregnated with carbonic acid gas is placed within the receiver A, and by tilting or inclining the bottle and chamber as shown in red Fig. 2, the ball valve *g*, will by gravity leave its seat and allow the water in chamber D, to pass down into the bottle E, and carbonic acid gas is immediately eliminated and passes into the receiver impregnating the liquid F, and as the bottle E, and chamber D, are firmly attached before the water is admitted into E, there is no opportunity for the gas to escape.

I would remark that the chamber D, and bottle E, may be placed within the receiver and the same result would be obtained if the receiver be tilted. But I prefer having the device arranged as shown in the drawings and as previously described.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is,

The bottle E, and chamber D, connected together, and provided with the ball valve *g*, so that communication is obtained between the chamber D, and bottle E, by the tilting or inclining of the same when these parts are combined with and applied to the receiver A in the manner and for the purpose substantially as specified.

THOMAS WARKER.

Witnesses:
W. HAUFF,
W. TUSCH.